

CLAIMS

1. A motor with a rotation detecting device, comprising: a rotary shaft; a casing with a cylindrical part for rotatably containing said rotary shaft; and a rotation detecting device which detects rotation of said rotary shaft, characterized in that said rotation detecting device is supported by a sensor holder, and said sensor holder is disposed in the casing by incorporation from the incorporating direction to the cylindrical part of the rotary shaft.
2. The motor with a rotation detecting device according to claim 1, characterized in that a holder receiving part is formed on the inner peripheral surface of the cylindrical part of the casing, and the sensor holder is incorporated in said holder receiving part in the state of temporary holding.
3. The motor with a rotation detecting device according to claim 1 or 2, characterized in that a sensor support part in which the rotation detecting device is incorporated and a terminal support part in which a connecting terminal thereof is incorporated are formed in the sensor holder and a connecting opening part for seeing the terminal support part from the outside is formed on the peripheral surface of the cylindrical part of the casing.
4. The motor with a rotation detecting device according to claim 1, 2, or 3, characterized in that a brush unit in which a brush is incorporated is fixed on the opening side of the cylindrical part of the casing and the sensor holder in the casing is positioned and supported by the casing on the basis of fixing to the casing of the brush unit.
5. The motor with a rotation detecting device according to claim 3 or 4, characterized by being constructed such that a brush connecting terminal which is incorporated in the brush unit is extended long to be supported by the terminal support part of the sensor holder, and is seen from the connecting opening part of the casing.
6. The motor with a rotation detecting device according to claim 3, 4, or 5, characterized in that at least one projecting piece part which projects toward the outside diameter side is formed in the connecting opening part of the casing.
7. The motor with a rotation detecting device according to claim 6, characterized in that an external pull-out terminal unit which is electrically connected to each of connecting terminals of the rotation detecting device and the brush is incorporated into the connecting opening part from the outside diameter side of the cylindrical part.
8. The motor with a rotation detecting device according to claim 2, 3, 5, 6, or 7, characterized by being constructed such that the terminal of the terminal support part is supported in the state of projecting in the outside diameter direction of the cylindrical part,

and a support piece part on the channel back side which supports the terminal support part of the sensor holder is formed on the holder receiving part, and an incorporation load at the time of incorporating the external pull-out terminal unit to the terminal support part is received by the support piece part.

9. The motor with a rotation detecting device according to claim 6, 7, or 8, characterized by being constructed such that at least one engaging claw is formed on the incorporating tip side in the external pull-out terminal unit, and said engaging claw is engaged with a step-like engagement receiving part which is formed to the connecting opening part when the external pull-out terminal unit is incorporated in the connecting opening part.

10. The motor with a rotation detecting device according to claim 9, characterized in that the engagement receiving part is formed integrally when the cylindrical part is molded.